

**THE FOLLOWING IS A MARKED UP VERSION OF PAGE 1 OF THE
SPECIFICATION**

METHODS FOR TREATING ARTHRITIS PAIN~~USE OF BOTULINUM TOXIN
FOR TREATING VARIOUS DISORDERS AND CONDITIONS AND
ASSOCIATED PAIN~~

CROSS REFERENCE

This application is divisional of application serial number 08/627,118, filed
April 3, 1996, which is a continuation of serial number 08/173,996, filed
December 28, 1993, now abandoned. The entire contents of these prior
applications are incorporated herein by reference in their entireties.

FIELD OF THE INVENTION

The present invention provides novel methods for treating various disorders and conditions, with Botulinum toxins. Importantly, the present invention provides methods useful in relieving pain related to muscle activity or contracture and therefore is of advantage in the treatment of, for example, muscle spasm such as Temporomandibular Joint Disease, low back pain, myofascial pain, pain related to spasticity and dystonia, as well as sports injuries, and pain related to contractures in arthritis.

BACKGROUND OF THE INVENTION

Heretofore, Botulinum toxins, in particular Botulinum toxin type A, has been used in the treatment of a number of neuromuscular disorders and conditions involving muscular spasm; for example, strabismus, blepharospasm, spasmodic torticollis (cervical dystonia), oromandibular dystonia and spasmodic dysphonia


(laryngeal dystonia). The toxin binds rapidly and strongly to presynaptic cholinergic nerve terminals and inhibits the exocytosis of acetylcholine by decreasing the frequency of acetylcholine release. This results in local paralysis and hence relaxation of the muscles afflicted by spasm.

For one example of treating neuromuscular disorders, see U.S. Patent No. 5,053,005 to Borodic, which suggests treating curvature of the juvenile

IV. Conclusion

Examination and allowance of claims 18 and 21-29 is requested.

Respectfully Submitted,


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Date: July 16, 2003

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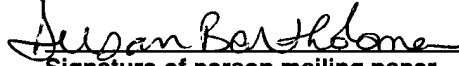
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CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. § 1.10

I hereby certify that this Transmittal Letter, the divisional patent application, preliminary amendment and the attached documents enclosed herein are being deposited with the United States Postal Service on this date July 16, 2003 in an envelope as "Express Mail Post Office to Addressee" mailing label number EV295682231US addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Susan Bartholomew

Name of person mailing paper


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Date: July 16, 2003

MARKED UP VERSION OF THE CLAIMS

Claims 1-17 (cancelled).

18. (original) A method for relieving pain associated with contractions in arthritis, said method comprising administering to a patient a therapeutically effective amount of a Botulinum toxin in order to relieve pain.

Claims 19-20 (cancelled).

21. (new) The method of claim 18, wherein the botulinum toxin is selected from the group consisting of botulinum toxin types A, B, C, D, E, F and G.

22. (new) The method of claim 18, wherein the botulinum toxin is a botulinum toxin type A.

23. (new) The method of claim 21, wherein the botulinum toxin is administered in an amount of between about 0.01 units and about 500 units.

24. (new) The method of claim 21, wherein the botulinum toxin is administered in an amount of between about 0.01 unit and about 50 units.

25. (new) The method of claim 21, wherein the contraction is a muscle contraction.

26. (new) A method for relieving arthritis pain associated with a muscle contraction, the method comprising administering to a patient with arthritis pain a therapeutically effective amount of a botulinum toxin thereby relieving an arthritis pain associated with a muscle contraction.

27. (new) The method of claim 26, wherein the botulinum toxin is selected from the group consisting of botulinum toxin types A, B, C, D, E, F and G.

28. (new) The method of claim 26, wherein the botulinum toxin is a botulinum toxin type A.

29. (new) A method for relieving arthritis pain associated with muscle activity, the method comprising administering to a patient a therapeutically effective amount of a botulinum toxin type A thereby relieving an arthritis pain associated with muscle activity.